

REMARKS OF CHRISTINE PHOEBE  
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY  
2004 NATIONAL WORKSHOP ON STATE BUILDING ENERGY CODES  
PHILADELPHIA, PENNSYLVANIA  
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Thank you. It is an honor to join you at this year's National Workshop on State Building Energy Codes. And, what a pleasure it is to be here in Philadelphia. The show gets better each year!

A "special thanks" goes to:

Karine Shamlian from our Mid-Atlantic Regional Office for Codes

Also a "big thanks" to all others who were involved in making this happen:

From our DOE Regional Office Staff: Tim Eastling, Dan Strout, John Devine, Molly Dwyer, and Doug Seiter

From our Headquarters Staff: Jean Boulin, Mark Bailey and Teresa Carroll

From our PNNL Team: Diana Shankle, BECP Program Manager, Rosemarie Bartlett, Pam Cole, Heather Dillon, Mark Halverson, Todd Taylor, Terry Shoemaker, and Cecilia Mendoza

It is an exciting time for my Office and for the energy efficiency and renewable energy technologies that we support. I would like to take this opportunity to offer a few remarks on where our office is headed and what some of our priorities are for the future. I'll do my best to describe the Federal and state roles, particularly in building energy codes. And I want to leave time for any questions or discussion you may want.

### **National Energy Policy**

The National Energy Policy which was released by President Bush just three years ago, has set in motion a change in the nature of the national debate over energy, and provide us with a roadmap to achieve greater energy security through dependable, affordable, and environmentally sound energy for the future. The National Energy Policy established six general goals to guarantee America's continued growth and prosperity:

First, the nation would aggressively reduce demand by employing energy efficient technologies and encourage sound conservation measures as essential components of our energy policy.

Second, even the most aggressive energy efficiency and conservation programs would not be enough by themselves to bring supply and demand into balance. And so, we would need to increase energy supply, with special emphasis on domestic supply.

Third, to assure energy security, we would need to maintain a diversity of fuels from a multiplicity of sources.

Fourth, we would need to dramatically upgrade our national energy infrastructure. We recognized that we would need more than supply to meet demand at affordable prices to consumers. We also need efficient means to deliver energy from the source to the consumer. Our aging infrastructure is inadequate to the task.

Fifth, we would need to accomplish our energy production, consumption, and conservation goals while simultaneously building our successful record of environmental protection.

And Sixth, we realized that our energy challenges would extend beyond 20 years. And so, we needed to provide a vision of the future in which solutions to these challenges transcend current thinking about the sources and uses of energy. The Secretary of Energy, Secretary of Interior and EPA Administrator proudly report that within the last three years we have made significant progress toward achieving each of these goals.

The National Energy Policy proposed 105 specific recommendations for action that would meet our short and medium-term needs and prepare our nation for a leap into a transformed energy future. Most of these recommendations could be handled through administrative action, and of those, we have either completed, or are on our way to completing, well over three-quarters of them. The remaining recommendations require legislation, and Congress, at the President's urging, has also made progress.

More than half of the Plan's 105 recommendations, 54 of them to be exact pertained to the importance of improving this Nation's energy efficiency and expanding our use of clean energy sources. We are still committed to reducing energy costs and improving

energy efficiency in the buildings that house our homes and businesses, and we look to the day when these buildings will generate much of their own power from clean energy resources.

You will be interested to know that Congress is proposing to add \$2.5 million to the building energy codes budget for 2005; \$0.5 million for the upgrading of model residential energy codes and \$2 million to help deploy and implement energy codes (training and technical assistance). Final approval of this still depends on approval in the House and Senate conference.

Why this commitment? Because energy remains a critically important issue. In the world, at this time, we are coming to grips with technologies that can make our buildings and communities more energy efficient and sustainable. There are any number of issues facing the world economy and environment and your businesses. But fundamental to it all is energy. The power needed to operate our nation's buildings uses one-third of all the energy in the country and represents two thirds of all the electricity. Oil consumption to heat and power--our buildings represent all the oil we import from Saudi Arabia. Energy use at these levels also brings along commensurate pollution and costs us \$240 billion a year. If we can gain control of our buildings' energy use, we have a shot at making our world, our nation, and communities more sustainable. Businesses can operate more reliably, affordably and efficiently. Comfort and worker productivity can be enhanced. Buildings can be more safe and secure.

## **Opportunities**

We know virtually every building can achieve energy savings: 20, 30 even 50% over typical construction. We can achieve these results with smart design and advanced, yet cost-effective, energy saving products. We need to be familiar with new and emerging technologies. Advanced lighting systems, solid state lighting, and day lighting are increasing in importance. Fuel cells, natural gas, combined cooling, heating, and power are technologies coming into greater use.

And we will continue our support for the development of "zero energy" homes and buildings that combine the latest energy-efficient building envelopes, appliances,

lighting, advanced controls, and heating and cooling systems to enable them to produce as much energy as they consume on an annual basis.

Solar energy continues to grow in use as prices come down. It can provide continuous service even when the grid goes down. It provides for "essential services" in emergencies to be sure lights, elevators, etc., can operate.

Instead of talking about 20, 30 or even 50% energy savings, my own personal goal is 120%--buildings that use so little energy, and produce their own, that they give back to the electric grid.

### **Technology Deployment Strategy**

The Office of Energy Efficiency and Renewable Energy is in the process of developing a Technology Deployment Strategy that will be completed by the 4th quarter of 2004. The Weatherization and Intergovernmental Program is conducting a reevaluation of its' program delivery processes at this time to not only serve as a contributor to the overall deployment strategy, but to increase our program efficiency and impact. A key part of this work is improving the delivery of technical assistance. Beginning with a kickoff meeting on April 26, 2004, a WIP technical assistance team has analyzed current practices in technical assistance and has begun to frame a strategy for improvement. A number of you received a message asking for your feedback on a proposed approach to delivering technical assistance described in an interim report posted on our website. (<http://www.eere.doe.gov/wip/tafeedback.html>)

### **CODES PROGRESS**

One of the reasons I am so optimistic about achieving these ambitious goals is the progress we are making in adopting and implementing building energy codes. This is happening all over the country, in states large and small.

I would please like to share the highlights of the progress made within the states since we last met.

### **Idaho**

The 2004 Idaho Legislative session has adopted the family of I-Codes which includes the 2003 International Energy Conservation Codes (2003 IECC) and this year, the new addition is the 2003 International Mechanical Code (2003 IMC). The 2003 codes can be adopted at the local level at any time with a deadline of January 1, 2005, for mandatory adoption.

### **New Mexico**

The adoption of the 2003 International Energy Conservation Code was finalized in May of 2004 by the New Mexico Construction Industries Commission and went into effect on July 1, 2004. The action taken incorporates all the details in the new energy code and eliminates provision in the electrical code that allowed all commercial building to have up to 2 watts per gross square foot in building lighting systems. Please note that compliance using ASHRAE 90.1-2001 is allowed in this new code.

### **Mississippi**

ASHRAE Standard 90.1-99 was adopted for all new construction for state owned buildings.

### **Maryland**

Maryland's efforts this past year will result in the following:

Commercial: Effective September 20, 2004, the Maryland Building Performance Standards (MBPS) will be based on the 2003 International Building Code (including Chapter 13- Energy Efficiency) Maryland Building Performance Standards (MBPS), based on the 2000 IECC, are mandatory statewide.

Residential: Effective September 20, 2004, the Maryland Building Performance Standards (MBPS) will be based on the 2003 International Residential Code (including Chapter 11- Energy Efficiency).

### **Utah**

Utah's Uniform Building Standard, has set the 2003 IECC with ASHRAE 90.1-2001 and upgraded lighting requirements as the current energy standard for the state.

Effective July 1, 1998, low-rise residential buildings shall be designed to comply with the requirements of the 1995 Model Energy Code. Commercial and high-rise residential buildings are still required to comply with the requirements of the ASHRAE/IESNA 90.1-1989.

### **District of Columbia**

As of January 9, 2004, the District of Columbia has a new building code based on the 2000 International Codes. This includes the 2000 International Energy Conservation Code, which was adopted without amendment, except for administrative matters, which were moved to Chapter 1 of the Building Code Supplement.

### **Montana**

On April 26, 2004, the Montana Building Codes Council unanimously approved adoption of the 2003 IECC, with exceptions. The draft proposal included the following exceptions; 1. Basement wall insulation below uninsulated floors, except for rim joist and perimeter cripple walls, may be delayed until such time as the basement is actually finished for occupancy. 2. Lesser R-value may be allowed for log building walls. 3. The builder or representative shall sign, date and complete the energy component label and permanently attach it to the interior electrical panel.

### **Pennsylvania**

The Pennsylvania Attorney General approved the Uniform Construction Code (UCC) Administration and Enforcement Regulation. It incorporates the International Energy Conservation Code 2003 and the International Residential Code 2003 (a code for one- and two-family dwellings no more than 3 stories in height). The UCC took effect on April 9, 2004, when code official registration ended, and a grandfathering period began. The UCC does not apply to projects that have already applied for permits, or where design or construction contracts have been signed prior to the UCC effective date.

## **Colorado**

In Colorado, a home rule state, the La Plata County Commissioners voted to amend the La Plata County Building Code by adopting the 2003 International Building Code, including the International Residential Code (including Chapter 11 Energy Efficiency), the International Energy Conservation Code, and other International Codes - effective June 1, 2004. This code will affect all unincorporated areas of La Plata County.

Colorado Springs adopted IECC 2000 with amendments, but is now working to update that standard to the IECC 2003 without amendments. Denver is back on track with a new mayor to adopt IECC, but no adoption date has been set at this point. The New Home Stakeholders Group in Ft. Collins is meeting regularly to integrate high performance building with efforts to upgrade the local energy code.

## **Nebraska**

Nebraska: The IECC 2000 was implemented for publicly-funded buildings, effective January 1, 2004. Recently, a bill was introduced to upgrade the State Energy Code for all buildings (not just publicly-funded buildings) to IECC 2003 (effective July 1, 2005, if passed). While the bill met with opposition from builders and code officials, the study done through a 2002 Codes and Standards Special Projects grant was instrumental in making the case for upgrading the State Energy Code to the 2003 IECC.

## **ON THE HORIZON**

### **REScheck and Above Code Advisor**

A prototype is being developed to provide real-time advise on above code technologies and design techniques, as the user works through the code compliance process with REScheck. The 'Above Code Advisor' will key on users' inputs and will assess possible improvements to proposed designs that will save energy, at little or no extra cost, alerting the user when advantageous options are available. The prototype will include web-links and knowledge-base articles related to the above code technologies and construction practices of the envelope components included in REScheck. This approach could become a deployment path for technologies and design guidelines from

Building America and Energy Star programs. At present, a prototype Above Code Advisor for REScheck is being developed to demonstrate this concept."

### **On Line Permitting**

We have developed an on-line permitting capability that will be officially launched later this year. We have been working with a few jurisdictions in the U.S. to demonstrate the capability. This capability will allow compliance to be completely electronic, allow jurisdictions to easily collect reports and data, and allow users to avoid trips to the code office.

### **REScheck and Energy Star**

Discussions have been held with EPA about providing a link from the DOE EnergyCodes.gov website to the Energy Star Builder Option Packages (BOPs). EPA is currently re-visiting their BOPs, so any decisions will depend on those results. However, the concept is that, while a user is progressing through REScheck, if the design approaches being 30% above code, they will be notified that their design might qualify for an EPA Energy Star rating and a link would be provided to EPA's website.

### **CONCLUSION**

We understand that a large part of the solution to our challenges will be found - not by Federal Government action alone - but in the efforts of the private sector, states and local governments where innovation flourishes and risk takers push the envelope.

We are steadfastly committed to heeding the President's call in the National Energy Policy to expand the use of public-private partnerships to revitalize our research and development efforts and meet our national energy goals.

My Office looks forward to continuing the successful partnerships that we have established with you. And with your help, we look forward to realizing our shared vision of dependable, affordable, and environmentally sound energy for the future.



Thank you very much. I will do my best to answer whatever questions you may have.